tendered to Mrs. Say for her liberal donation of the edition of Say's American Conchology, presented to the Academy this evening.

STATED MEETING, August 10, 1841.

Vice President Morton in the Chair.

DONATIONS TO LIBRARY.

Osservazioni sulla larve, ninfe, e abitudini della Scolia flavifrons, del Carlo Passerini. 4to. Pisa, 1840. From the Author.

American Journal of Science and Arts. Vol. xli., No. 1. July, 1840. From the Editors.

Journal of the Asiatic Society of Bengal. Nos. 19, 20, 21, (New Series.) From the Editors.

Proceedings of the American Philosophical Society, for May and June, 1841. From the Society.

First Book of Natural History, (Physiology and Animal Mechanism.) From the French, by W. S. W. Ruschenberger, M. D. Philad. 12mo. 1841. From the Translator.

A Voyage Round the World, including an Embassy to Muscat and Siam, in 1835, 1836 and 1837. By W. S. W. Ruschenberger, M. D. Philad. 8vo. 1838. From the Author.

Three Years in the Pacific; including notices of Brazil, Chili, Bolivia, and Peru. By an Officer of the U. S. Navy, (W. S. W. Ruschenberger, M. D.) 8vo. Philad. 1834. From the Author.

Written Communications.—Miss M. A. Morris, of Germantown, Pennsylvania, through Dr. B. H. Coates, submitted the following "Observations on the development of the Hessian Fly," dated August 6, 1841.

"Having completed a series of observations on an insect that has for years destroyed the wheat in the neighbourhood of Philadelphia, I now beg leave to lay them before the Academy of Natural Sciences, with specimens of the insect in all its forms, from the egg to the perfect fly. To those familiar with Mr. Say's description, accompanied by Mr. Le Sueur's accurate drawings, given in the first volume of the Journal of the Academy, no doubt can arise as to the identity of the male insect now presented with the Cecidomyia destructor of Mr. Say; but the female differs materially in colour, her body being entirely black or blackish-brown; and the wings are destitute of the hairy fringe so conspicuous in the male.

In the months of March, April and May, I have frequently found the larvæ feeding in the centre of the straw, from the root up to above the last joint. They were then of a pale greenish white colour, translucent, with an internal visceral green line; mandibles of a dark brown colour. At this early period the larvæ have frequently been so small that a magnifying glass has been necessary to detect them,

In the present year, 1841, my observations were unavoidably delayed until the first of June; when I found that the larvæ near the root had left the inside of the straw, and become pupæ on the outside, under the sheath. On the 20th of June, most of the puparia were empty; and on agitating the wheat, swarms of flies rose from off the grain, where they had been resting. I was fortunate in obtaining one of these while in the act of depositing her egg on the grain. Thus interrupted, she placed six on my finger. Three of these I have glued to the paper near her. When deposited they were of a pale straw colour, and inconspicuous to the naked eye, unless collected in numbers. On the same day, I found

larvæ in the straw, generally above the last joint. They were feeding in or near the joint, with their heads always downwards.

The wheat, which had to this time (June 20th) promised an abundant harvest, began to shrivel; and a practised eye could detect, from the appearance of the grain, in which stalk we were to look for the larvæ.

From June 20th to July 10th, the flies continued to deposit their eggs on the grain; though on the last mentioned date but few were to be met with. By July 12th, the grain in this neighbourhood was all reaped; and on that day I had a sheaf of wheat placed in the library, where I could with more accuracy watch the progress of the larvæ remaining in the straw. They continued to feed for some days; when they became quiescent, fixed themselves by their mandibles in the joint of the straw, and with their heads downwards, gradually assumed a chesnut brown colour; the outer skin becoming the puparium.

From a handful of infested straws placed under a bell glass, I have the following results. Most have perished; some have passed into the pupa state in the centre of the culm; a few of the perfect insects I have liberated from the centre of the straw, by opening a passage for them with my penknife; and great numbers have been destroyed by the Ceraphion destructor; two of which I send with the Cecidomyia.

From the sheaf of wheat I have the following results. Many of the larvæ perished; some became pupæ without change of situation; and the flies continued to rise from the straw until the 31st of July. Of these I succeeded in catching twenty-six. Five are Cecidomyias, and the remainder are Ceraphion destructor; some of which are destitute of wings. A small number of pupæ are still to be found in the field in the stubble.

From this series of facts it might be presumed that the history of this interesting and destructive insect was decided; but the statements of observers whose information and accuracy cannot be questioned, prove discrepancies in its history that can only be reconciled by supposing that there are two species under observation. The species now presented will agree with Mr. Say's statement, that

"the perfect fly appears early in June, lives but a short time, deposits its eggs and dies." The remainder of Mr. Say's history must apply to that species which has been so frequently observed to deposit its eggs on the leaf."

A letter was read by the Corresponding Secretary from Major James D. Graham, U. S. A., dated July 30, 1841, tendering his acknowledgments for his election as a corresponding member of the Academy.

STATED MEETING, August 17, 1841.

Vice President Morton in the Chair.

DONATIONS TO LIBRARY.

Gardener's Dictionary. By Philip Miller, F. R. S., F. A. 7th edition. Fol. London, 1759. From Mr. Phillips.

Report of the Secretary of War in reference to the construction of the Potomac Aqueduct. 8vo. Washington, 1841. From Col. Abert.

Written Communication.—A lettter was read from Owen Mason, Esq., of Providence, Rhode Island, acknowledging his election as corresponding member of the Society.

Dr. Morton (Dr. Coates taking the chair) made some remarks on the sutures of the cranium as connected with the growth of the corresponding bones.

He adverted to the opinion long in vogue, that the chief use of the sutures was to facilitate the process of parturition; a theory which is refuted by the fact that they exist in the skulls of all the ovipar-